

Figure 1

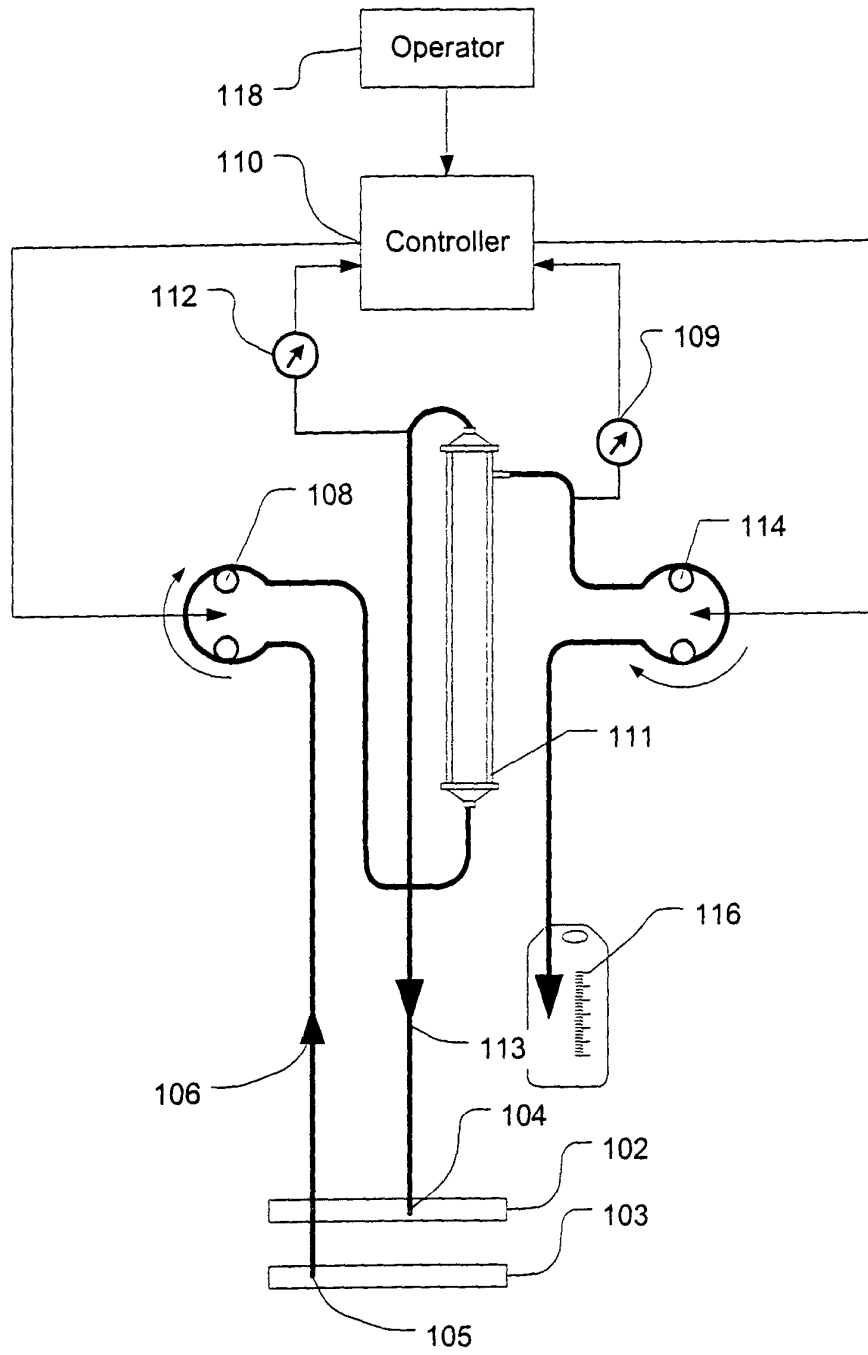


Figure 2

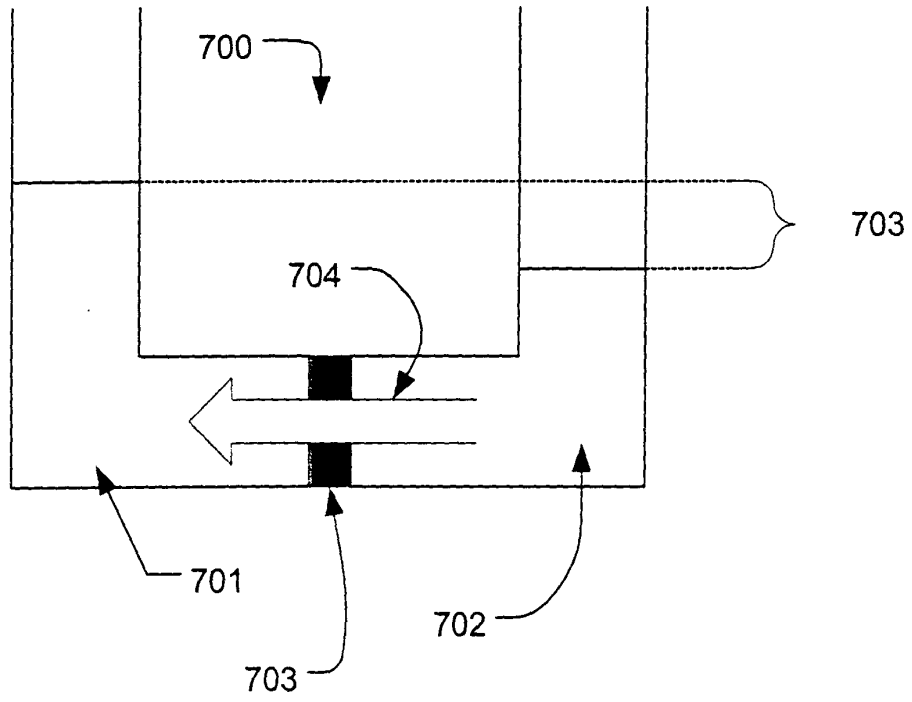


Figure 3

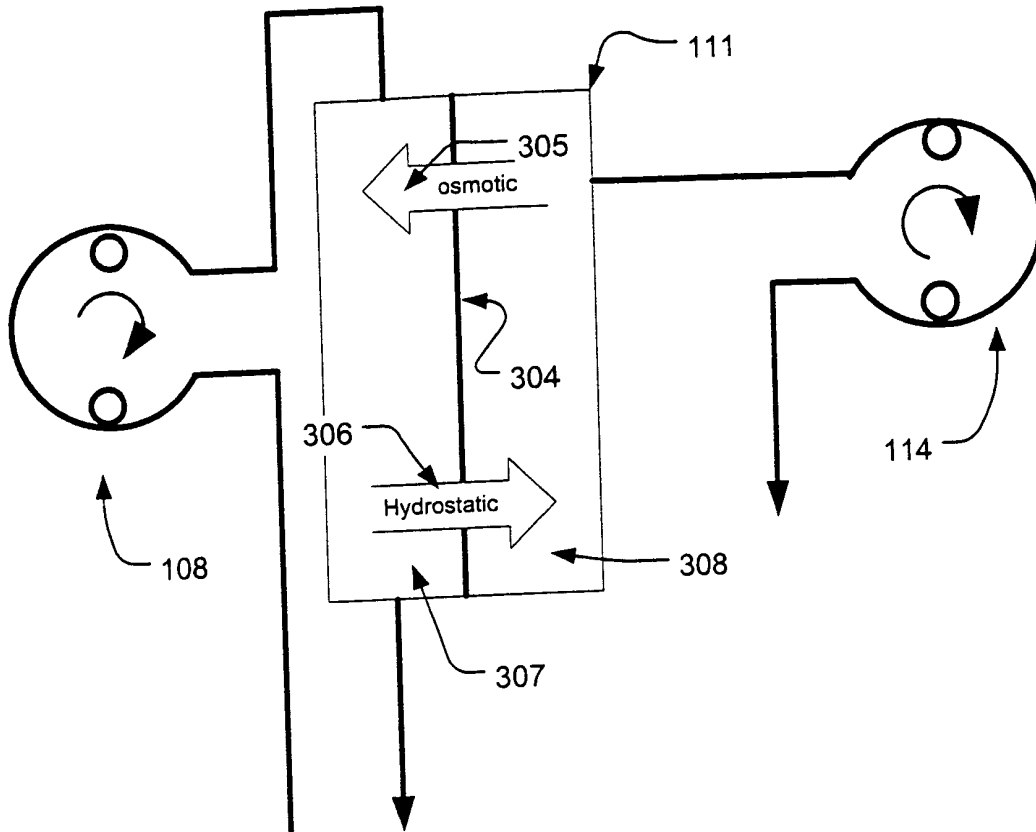


Figure 4

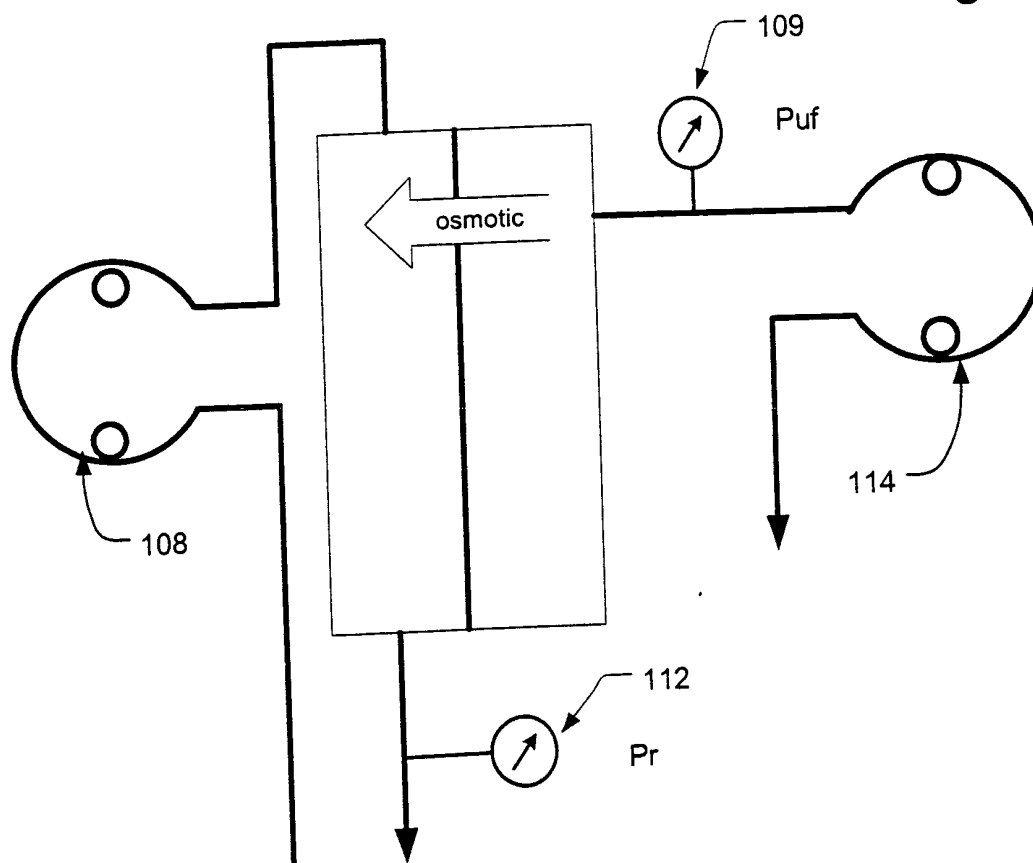


Figure 5

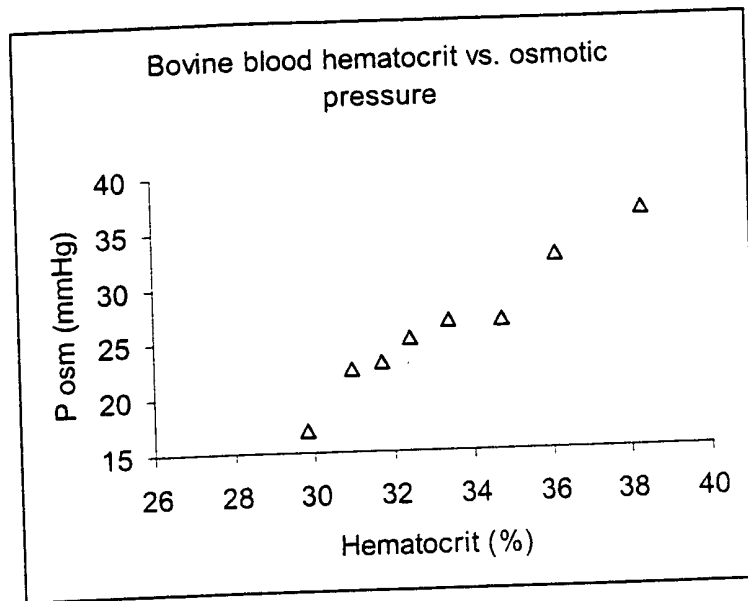


Figure 6

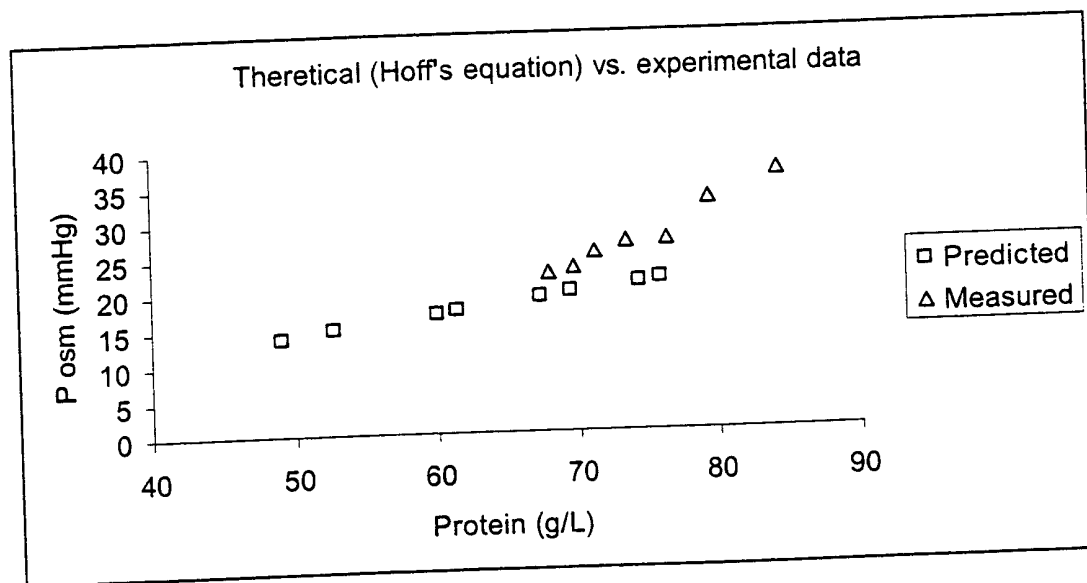


Figure 7

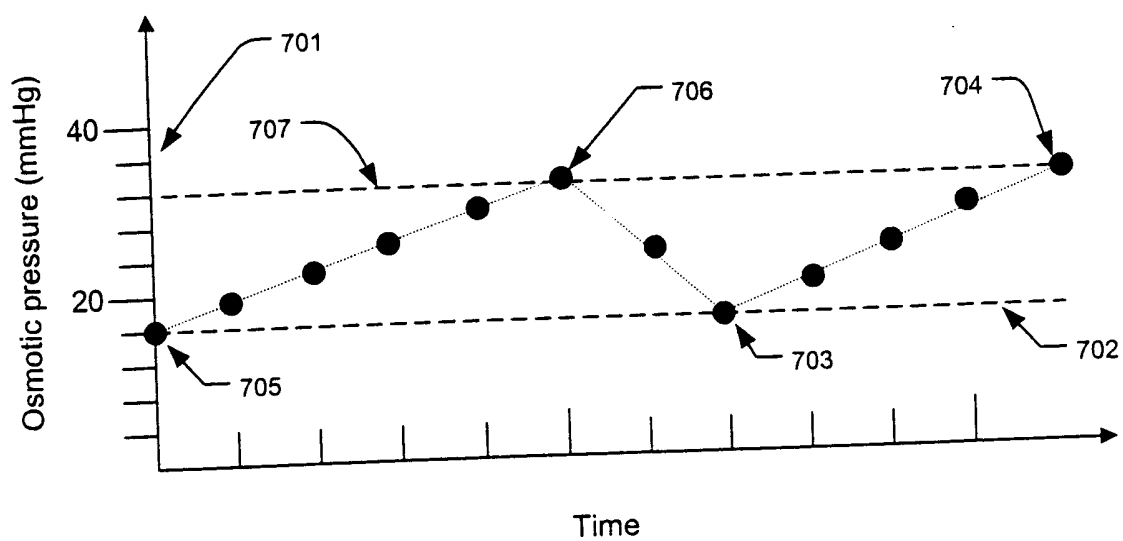
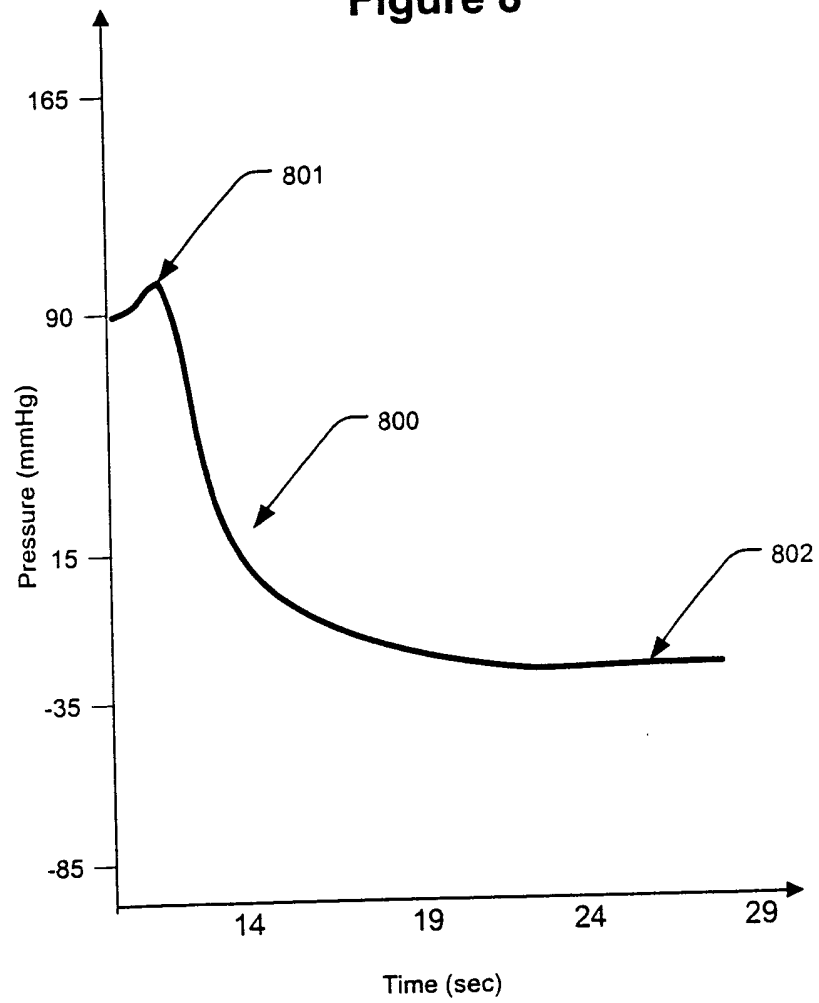


Figure 8



The diagram illustrates the control system for a dialysis machine, featuring the following components and their interconnections:

- User Interface:**
 - User Settings Entry (909)** and **User Settings Display (910)** are connected to the **Monitor CPU (914)**.
- Controller CPU (905):**
 - Receives input from the **Air Detector (902)**.
 - Exchanges data with the **Monitor CPU (914)**, including **Blood leak**, **Pressures**, **Weight**, and **Motor Currents** signals.
 - Sends **Velocity Command** and **Duration** signals to the **Motor Controller (903)**.
 - Receives a **Control Return** signal from the **Motor Controller (903)**.
- Motor Controller (903):**
 - Receives **Actual Position** feedback from the **Encoder (909)** of the **Motor (906)**.
 - Sends **PWM signal** and **PWM Signal** to the **1/2 Bridge (904)**.
 - Receives **Motor Current** feedback from the **1/2 Bridge (904)**.
- A/D Converter (916):**
 - Receives signals from the **Strain Gage (913)**, **Pressure Sensors (911)**, and **Blood Leak Detector (910)**.
 - Provides data to the **Monitor CPU (914)**.
- Actuators and Sensors:**
 - The **1/2 Bridge (904)** drives two **Motor (906)** units.
 - Each **Motor (906)** is coupled with an **Encoder (909)** for position feedback.
 - The motors drive the **Ultrafiltrate Pump (903)** and the **Blood Pump (904)**.
 - The **Fluid Bag (901)** is connected to the **Blood Pump (904)**.
 - Sensors (913, 911, 910)** monitor the system's physical parameters for feedback.

900

Figure 10

